CLAIMS

1. An isolated nucleic acid comprising a nucleotide sequence encoding an CRSP-1 polypeptide.

2. The isolated nucleic acid of claim 1, wherein the CRSP-1 polypeptide is a mammalian polypeptide.

3. The isolated nucleic acid of claim 2, wherein the CRSP-1 polypeptide is a human polypeptide.

4. The isolated nucleic acid of claim 1, wherein the CRSP-1 polypeptide has an overall amino acid homology of at least about 70% with the amino acid sequence set forth in SEQ ID NO: 2.

5. The isolated nucleic acid of claim 4, wherein the CRSP-1 polypeptide has the amino acid sequence set forth in SEQ ID NO: 2.

6. The isolated nucleic acid of claim 1, wherein the CRSP-1 polypeptide is a mature form of an CRSP-1 polypeptide.

7. The isolated nucleic acid of claim 6, wherein the CRSP-1 polypeptide comprises at least about amino acid 21 to about amino acid 172 of SEQ ID NO: 2.

8. The isolated nucleic acid of claim 1, wherein the CRSP-1 polypeptide comprises an amino acid sequence which is at least about 70% similar to at least about 15 consecutive amino acid residues of SEQ ID NO: 2.

9. The nucleic acid of claim 1, wherein the CRSP-1 polypeptide comprises an amino acid sequence which is at least about 70% similar to at least about 50 consecutive amino acid residues of SEQ ID NO: 2.

10. The isolated nucleic acid of claim 1, wherein the CRSP-1 polypeptide comprises at least about 10 consecutive amino acids of SEQ ID NO: 2.

11. The isolated nucleic acid of claim 1, wherein the CRSP-1 polypeptide comprises at least about 50 consecutive amino acids of SEQ ID NO: 2.

12. The isolated nucleic acid of claim 1, wherein the CRSP-1 polypeptide is a functional CRSP-1 polypeptide.

13. The isolated nucleic acid of claim 1, wherein the CRSP-1 polypeptide is capable of interacting with a molecule.

14. The isolated nucleic acid of claim 13, wherein the molecule is a receptor.

15. The isolated nucleic acid of claim 1, which has an overall nucleotide identity of at least about 70% with the nucleotide sequence set forth in SEQ ID NO: 1.

16. The isolated nucleic acid of claim 1, which has an overall nucleotide identity of at least about 70% with the nucleotide sequence set forth in SEQ ID NO: 3.

17. An isolated nucleic acid comprising a nucleotide sequence which is at least about 80% identical to at least about 50 consecutive nucleotides SEQ ID NO: 1 or complement thereof.

18. An isolated nucleic acid comprising a nucleotide sequence of at least about 20 consecutive nucleotides of SEQ ID NO: 1 or 3 or complement thereof.

19. The isolated nucleic acid of claim 18, further comprising a label.

20. The isolated nucleic acid of claim 1, which hybridizes under high stringency hybridization conditions to the nucleic acid set forth in SEQ ID NO: 1 or to the complement thereof.

21. A vector comprising a nucleic acid of claim 1.

22. A host cell comprising the vector of claim 21.

23. An isolated CRSP-1 polypeptide.

24. The isolated CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide is a mammalian polypeptide.

25. The isolated CRSP-1 polypeptide of claim 24, wherein the CRSP-1 polypeptide is a human polypeptide.

26. The isolated CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide has an overall amino acid homology of at least about 70% with the amino acid sequence set forth in SEQ ID NO: 2.

27. The CRSP-1 polypeptide of claim 26, wherein the CRSP-1 polypeptide has the amino acid sequence set forth in SEQ ID NO: 2.

28. The isolated CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide is a mature form of an CRSP-1 polypeptide.

29. The isolated CRSP-1 polypeptide of claim 28, wherein the CRSP-1 polypeptide comprises at least about amino acid 21 to about amino acid 172 of SEQ ID NO: 2.

30. The isolated CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide comprises an amino acid sequence which is at least about 70% similar to at least about 15 consecutive amino acid residues of SEQ ID NO: 2.

31. The CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide comprises an amino acid sequence which is at least about 70% similar to at least about 50 consecutive amino acid residues of SEQ ID NO: 2.

32. The isolated CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide comprises at least about 10 consecutive amino acids of SEQ ID NO: 2.

33. The isolated CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide comprises at least about 50 consecutive amino acids of SEQ ID NO: 2.

34. The isolated CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide is a functional CRSP-1 polypeptide.

35. The isolated CRSP-1 polypeptide of claim 23, wherein the CRSP-1 polypeptide is capable of interacting with a molecule.

36. The isolated nucleic acid of claim 35, wherein the molecule is a receptor.

37. A method for modulating an CRSP-1 activity, comprising contacting an CRSP-1 polypeptide with a compound which is capable of modulating a CRSP-1 activity, such that the CRSP-1 activity is modulated.

38. The method of claim 37, wherein the CRSP-1 activity is modulation of cell proliferation, differentiation or cell survival.

39. The method of claim 38, wherein the compound is an antagonist.

40. The method of claim 39, wherein the antagonist inhibits the interaction of CRSP-1 with an CRSP-1 receptor.

41. The method of claim 37, wherein the CRSP-1 activity is binding to a molecule.

42. The method of claim 41, wherein the molecule is an CRSP-1 receptor.

43. A method for modulating growth, differentiation, or survival of a cell, comprising contacting the cell with an CRSP-1 compound which is capable of modulating cell growth, differentiation, or survival.

44. The method of claim 43, wherein the compound is an agonist of a CRSP-1 activity.

45. The method of claim 44, wherein the compound is an antagonist of a CRSP-1 activity.

46. The method of claim 45, wherein the compound is selected from the group consisting of a polypeptide, a nucleic acid, a peptidomimetic, and a small molecule.

47. The method of claim 46, wherein the nucleic acid is selected from the group consisting of a gene replacement, an antisense, a ribozyme, and a triplex nucleic acid. The method of claim 43, wherein the compound interacts with an CRSP-1 protein.

48. The method of claim 43, wherein the compound interacts with a CRSP-1 receptor.

49. The method of claim 48, wherein the compound is a CRSP-1 polypeptide.

50. A method for treating or preventing a disease caused by or contributed to by an aberrant CRSP-1 activity in a subject, comprising administering to the subject an effective amount of a pharmaceutical composition comprising a compound

which is capable of modulating a CRSP-1 activity, such that the disease is treated or prevented in the subject.

51. The method of claim 50, wherein the disease is a hyper- or hypoproliferative disease.

52. The method of claim 52, wherein the compound is an CRSP-1 polypeptide.

53. A method for treating or preventing a disease associated with an abnormal cell proliferation, differentiation or survival in a subject, comprising administering to the subject a pharmaceutically effective amount of an CRSP-1 therapeutic.

54. The method of claim 53, wherein the disease is a hyperproliferative disease.

55. The method of claim 53, wherein the disease is a hypoproliferative disease.

56. A method for identifying a CRSP-1 therapeutic, comprising

(i) combining a CRSP-1 protein, a CRSP-1 binding partner, and a test compound under conditions wherein, but for the test compound, the CRSP-1 protein and CRSP-1 binding partner are able to interact; and

(ii) detecting the formation of a CRSP-1 protein/CRSP-1 binding partner complex,

such that a difference in the formation of a CRSP-1 protein/CRSP-1 binding partner complex in the presence of a test compound relative to the absence of the test compound is indicative that the test compound is a CRSP-1 therapeutic.

57. The method of claim 56, wherein the CRSP-1 binding partner is an CRSP-1 receptor.

58. A method for determining whether a subject is at risk of developing a disease or condition which is caused or contributed to by an aberrant CRSP-1 activity, comprising measuring in the subject or in a sample obtained from the subject at least one CRSP-1 activity, wherein a difference in the CRSP-1 activity relative to the CRSP-1 activity in a normal subject indicates that the subject is at risk of developing a disease caused by or contributed to by an aberrant CRSP-1 activity.

59. The method of claim 58, wherein a CRSP-1 activity is determined by measuring the protein level of an CRSP-1 protein.

60. The method of claim 58, comprising the step of determining whether the CRSP-1 gene of the subject comprises a genetic lesion.

61. The method of claim 60, wherein the step of determining whether the CRSP-1 gene comprises a genetic lesion, further comprises the steps of:

(i) contacting a nucleic acid comprising at least a portion of the CRSP-1 gene from a subject with at least one nucleic acid probe capable of interacting with a wild-type CRSP-1 gene; and

(ii) detecting the formation of a hybrid between the portion of the CRSP-1 gene from the subject and the at least one nucleic acid probe,

such that the extent of formation of a hybrid between the portion of the CRSP-1 gene from the subject and the at least one nucleic acid indicates whether the subject is at risk of developing a disease associated with an aberrant CRSP-1 activity.